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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,419	12/21/2001	Joseph Vanniasinkam	M-9340 US	3557
7590 06/29/2004				
Finnegan, Henderson, Farabow Garrett & Dunner, L.L.P. 1300 i Street NW Washington, DC 20005-3315		EXAMINER KIANNI, KAVEH C		
		ART UNIT	PAPER NUMBER	
		2877		

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/028,419

Applicant(s)

VANNIASINKAM ET AL.

Examiner

Kevin C Kianni

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 17-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 17-22 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

- Applicant's election without traverse of claims 1-16 and 23, group I, in a paper submitted on 11/07/03 is acknowledged. The requirement is still deemed proper and is therefore made FINAL

### ***Claim Objections***

1. Claim 15 is objected to because of the following informalities: there is an extra word 'an' in the first line of claim 15. Appropriate correction is required.

### **Claim Rejections - 35 USC § 103**

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims are rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer (US 6583934).

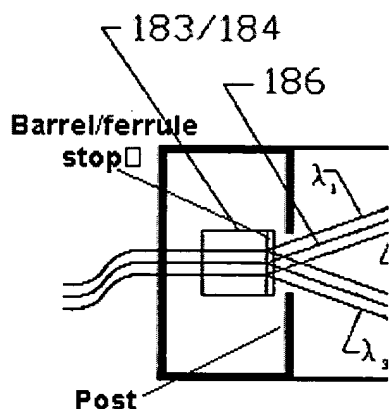
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Regarding claims 1-6 and 23, Kramer teaches a monitor device (shown in at least figures 1 and 5-6), comprising a first section capable of receiving a WDM beam (see fig 5, item first section containing at least optical fiber 82, lens and grating 10 that receives WDM beam via fiber 82; col. 13, lines 48-52), a diffraction grating 10 formed connected with the first section (shown in fig. 5, item diffraction grating 10 attached to the first section via housing 100/2<sup>nd</sup> section), the WDM beam 88 being directed onto the internal surface of the diffraction grating 10 (shown in fig. 5, item 10 receives WDM beam), the diffraction grating/means 10 providing angularly separated beams  $\lambda_1.. \lambda_3$  on the external surface of the diffraction grating 10; a second section/means-for-aligning- the-grating-with-the-means-for-detecting 100 connected to the first section (see item housing 100 integrally aligns all parts including the grating 10 and the detector 94, that supports/connected to the first section); and a third section connected the second section (see figure 5 or/and 6, 3<sup>rd</sup> section containing light receiver 94, connected to the housing/support section 100), the third section positioned/means-for-detecting relative to the first section to receive spatially separated light beams of a selected diffraction order from the diffraction grating (shown in fig. 5/6, item 94 receives spatially separated light beams of a selected diffraction order  $\lambda_1.. \lambda_3$  from the diffraction grating 10). Kramer further teaches wherein the reflective surface is coated external to the first section with thin/reflective/gold film to enhance internal reflection of the WDM beam (see col. 10, line 66-col. 11, line 15).

However, Kramer in the first embodiment does not explicitly/specifically teach wherein the above monitor in the preamble is a demultiplexor, a reflective surface, coated with a silver film, integrally formed on the first section that directs the WDM beam received into the first section onto a bottom surface of the diffraction gating . Nevertheless, Kramer's monitor device diffracts WDM beam into individual wavelengths and in second embodiment Kramer teaches a reflective surface integrally formed on the first section that directs the WDM beam received into the first section onto a bottom surface of the diffraction gating (see fig. 18 and 19, item reflector 15 and grating 15') that the reflecting surface is coated with a reflecting coating such as gold or aluminum (see col. 9, line 66-col. 11, line 5). Thus, It is well known to those of ordinary skill in the art that separation of multiplexed light into separate wavelengths known as demultiplexor, and it would have been obvious to a person of ordinary skill in the art when the invention was made to combine different embodiments of Kramer's teachings such as by replacing the grating 10 with that of double grating 250 in which item 15 functions as a reflector and use a silver coating rather than a gold or aluminum in order to construct a demultiplexing system that includes the above limitations since such coating would have essentially the same functional effect and since such demultiplexing system would provide a surface relief/aligner transmission grating with improved durability with a highly diffraction efficiency performance (col. 2, lines 21-24 and 57-62).

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The statements advanced in claims 1-6 and 23, above, as to the applicability and disclosure of Kramer are incorporated herein as follows:



Regarding claims 7-16, Kramer further teaches wherein the first section includes an integrally formed collimating lens, the integrally formed collimating lens collimating the WDM beam received from an optical fiber (shown in at least fig. 6, item 86); further including a barrel 183 integrally formed with the first section, the barrel capable of receiving an optical fiber 184 and aligning the optical fiber 184 with the collimating lens 87 (see at least fig. 10a, item barrel 183 receives fiber(s) 184 and aligns it with the collimating lens 87; see also col. 19, lines 37-43); a post integrally formed with the first section, the post capable of receiving a barrel (shown in above figure (10a), item post in front of the barrel 183 receiving the barrel/ferrule 183); wherein the barrel includes a fiber access and a fiber stop (shown in above figure (10a) in which the fibers 184 entering the ferrule/barrel 183 are stopped at the aperture portion of the barrel); wherein the third section includes a focusing lens (shown in at least figure 6, item 92);

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wherein the third section further includes, a support around the focusing lens (shown in fig. 100, item lens 92 is integrally formed in demultiplexor 120 and supported/attached to the housing 100); wherein a detector array 94 can be mounted on the support 100 so that the spatially separated beams are directed onto individual detectors of the detector array (see fig. 5/6 item photodetector array 94); wherein optical fibers are arranged to receive individual ones of the spatially separated beams (shown in at least fig. 10a, item receiving fibers in the array of fibers 186); wherein the first section, the diffraction grating, the second section, and the third section are integrally formed (shown in at least fig. 5, all optical items including the first section, second/support/housing section, the diffraction grating and the third/receiving section are integrally formed as a demultiplexor).

- The examiner kindly advises the applicant to narrow the scope of the independent claims in order to make the case allowable.

#### ***Citation of Relevant Prior Art***

4. Prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In accordance with MPEP 707.05 the following references are pertinent in rejection of this application since they provide substantially the same information disclosure as this patent does. These references are:

Chen et al. 6563977 teaches at least claims 1 and 23

Yang et al. 6275630 teaches at least claims 1 and 23

Zhang et al. 6108471 teaches at least claims 1 and 23

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Wade 6236780

These references are cited herein to show the relevance of the apparatus/methods taught within these references as prior art.

***Contact Information***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to K. Cyrus Kianni whose telephone number is (571) 272-2417.

The examiner can normally be reached on Monday through Friday from 8:30 a.m. to 6:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font, can be reached at (571) 272-2415.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 872-9306 (for formal communications intended for entry)

**or:**

Hand delivered responses should be brought to Crystal Plaza 4, 2021  
South Clark Place, Arlington, VA., Fourth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 308-0956.

A handwritten signature in black ink, consisting of a stylized 'K' followed by a long horizontal line.

K. Cyrus Kianni  
Patent Examiner  
Group Art Unit 2877

June 18, 2004